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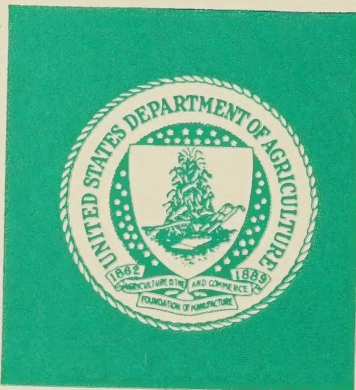
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Annotated Bibliography on Quality and Management of the WIC Program

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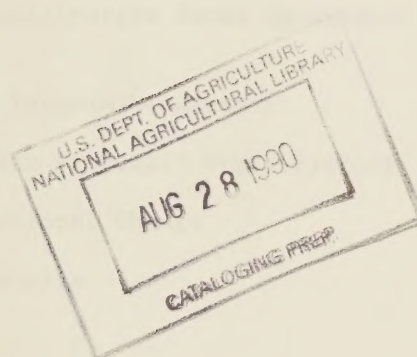


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Annotated Bibliography on Quality and Management of the WIC Program

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INTRODUCTION

This document contains a literature review prepared for the WIC Administrative Funds Management Study. In its initial form, this review served as a learning tool for the study team, allowing them the opportunity to read standard and current publications across several disciplines where practitioners have either evaluated various aspects of the WIC Program or have conducted other studies which might inform day-to-day WIC operations.

As this study progressed (through telephone surveys of State and local WIC directors and coordinators and through site visits to State and local WIC agencies), interview respondents expressed some interest in learning about materials that might be helpful to WIC Program managers and coordinators. Therefore, this literature review briefly describes a sample of publications that might be used as planning tools by State and local WIC managers and nutritionists. Entries have been written to provide information that will enable these potential users to decide whether or not a specific publication might be helpful.

It is important to note that this review is not meant to be comprehensive. Rather, the materials included here are indicative of the books and articles that have been published (usually within the last decade) in selected topical areas.

The publications in this literature review are categorized under three general headings. The first section, Functional Areas of the WIC Program, includes materials on dietary assessment, anthropometry, and nutrition education. For these three categories, the important criterion for inclusion of a publication was its potential informativeness for WIC coordinators and nutritionists who are responsible for assessing the diets and obtaining anthropometric measures of prospective and participating WIC clients.

Because there is an extremely broad literature on dietary assessment, this review presents some representative materials which emphasize recent evaluations of methods for conducting dietary assessments; which offer overviews of studies of dietary assessment methods; or which focus on conducting dietary assessments with pregnant women, infants, or children or in community settings.

The section on anthropometry presents information on the most recent publications which describe the accepted methods for correctly completing and recording anthropometric measures.

The entries under nutrition education include studies of nutrition education in the WIC Program along with several studies of nutrition education among similar client groups and a few articles suggesting new or modified approaches to teaching nutrition.

Section II presents materials on WIC Program Management. These publications--many of which were produced by the Food and Nutrition Service of the U.S. Department of Agriculture--are grouped under two subheadings, WIC Program Operations and WIC Administrative Funds Management. Because many local WIC staff may not be familiar with recently completed studies, this section includes descriptions of the final reports for the most recent studies of WIC such as the national WIC evaluation and the study of WIC program and participant characteristics.

The final section, General Program Management, encompasses books and articles on Management of Public Organizations, Organizational Change, and Cost Analysis. The entries in this section represent a selection of traditional texts and current publications in these more general administrative areas. It is not feasible in a limited effort such as this one to provide an extensive annotated review of this literature. The entries on management and organizational change should be viewed as indicative of the content of the variety of publications in these fields. As noted earlier, the books and articles included here have been chosen because they may be of particular interest to WIC managers at both State and local levels.

The literature on various forms and types of cost analysis is particularly extensive. Thus, this review presents a representative bibliography without annotation of a broad range of the literature in this area. Some of the entries in this bibliography are studies of administrative costs and effects conducted by Abt Associates. Cost analyses in the WIC Administrative Funds Management Study will apply methodologies similar to the ones described in these reports.

Some of the periodical publications appearing here were identified via computer searches of the AGRICOLA, ERIC, and MEDLARS data bases.

I. FUNCTIONAL AREAS OF THE WIC PROGRAM

Dietary Assessment

Beal, V.A., and M.J. Laus (eds.) (1982) Proceedings of the Symposium on Dietary Data Collection, Analysis, and Significance, June 15-16, 1982. Amherst: Massachusetts Agricultural Experiment Station, College of Food and Natural Resources, University of Massachusetts.

The twelve papers presented at this conference covered a broad range of conceptual and practical issues in dietary assessment, including: the reliability and validity of traditional approaches to dietary data collection; statistical issues in research sampling and design and in the analysis of nutritional intake data; problems of nutrient availability; the roles of dietary allowances and ideal bases for their estimation; and the role of computers in collecting and analyzing intake information.

Presentations emphasized areas for further research including: methods of recall; data bases used to translate foods into nutrients; bases for judging dietary adequacy (especially the limitations of the Recommended Daily Allowances); and methods for analyzing the relationships between dietary intakes and other physical and biochemical findings.

Beaton, G.H., J. Miller, V. McGuire, T.E. Feather, and J.A. Little. (1983) "Source of Variance in 24-Hour Dietary Recall Data: Implications for Nutrition Study Design and Interpretation. Carbohydrate Sources, Vitamins, and Minerals." American Journal of Clinical Nutrition 37: 986-995.

Twenty-four-hour dietary recalls were administered six times to thirty women and thirty men. Intakes were analyzed for nutrient and caffeine content. The women consumed more calories and nutrients (except calcium) on weekends and consumed more caffeine on weekdays than on weekends. Inter-individual variations were smaller than intraindividual variations (although caffeine again was the exception), reinforcing the findings of other studies that although twenty-four-hour recalls may be suitable for some studies of groups, they are

not adequate descriptors of "normal" intake at the individual level.

Block, G. (1982) "A Review of Validations of Dietary Assessment Methods." American Journal of Epidemiology 115: 492-505.

Block reviews recent studies of a number of methods of dietary assessment including the dietary history, the seven-day-record, and the twenty-four-hour recall. Studies of methodological validity have compared estimates of nutrient intake by applying two different dietary assessment methods, by repeated (over time) applications of a single method, or by comparing the results of a particular method with data obtained through observation of food consumption.

Several studies which compared estimates of nutrient intake obtained through diet histories with estimates from dietary records found that the histories yield higher intake estimates of all nutrients. Also, repeated applications of dietary histories found that their reliability is high.

Twenty-four-hour recalls appear to provide accurate data but they do not create an adequate basis for assessing individual diet because the day-to-day variation in individual diet makes the diet for a single day unrepresentative. However, studies of food frequencies have found high correlations between nutrient estimates obtained through food frequencies with estimates obtained from more extensive diet histories.

In concluding his review, Block recommends research which uses physical indicators of intake, such as weight change or biochemical measures, as appropriate comparisons for validating nutrient estimates obtained through application of any of the dietary assessment methods.

Endres, J.M., M. Sawicki, and J.A. Casper. (1981) "Dietary Assessment of Pregnant Women in a Supplemental Food Program." Journal of the American Dietetic Association 79: 121.

This study compared the nutrient composition of foods and the nutrient densities of the diets (recorded from twenty-four-hour dietary recalls) of

two study groups of WIC participants using the Ohio State University's nutrient data base and the 1974 RDA. In addition, the frequency of consumption of specific WIC-approved foods was also calculated. The sample was drawn from the populations of 102 Illinois counties. Twenty-four-hour dietary recalls were collected from 766 pregnant women by trained interviewers at selected WIC clinics. One hundred and fifteen (15 percent) of the study participants had received WIC benefits for at least six months, and 651 women (85 percent) were interviewed during their initial visits to WIC clinics.

Data were analyzed using the Nutrient Dietary Data Analysis System (NDDA). Pregnant women who had received WIC foods for at least six months had significantly higher nutrient and calorie intakes than non-WIC participants. The results of the nutrient composition analysis were similar. The two WIC groups consumed foods that met or exceeded 100 percent of the RDA for thiamin, riboflavin, niacin, and vitamins A and C. Intakes of vitamin B₁₂, calcium, and iron met at least 80 percent of the RDA. Intakes in the non-WIC group never exceeded WIC group levels but did exceed RDA levels for riboflavin and vitamin C. Nutrient density did not increase with the receipt of WIC foods. The women in the WIC group reported greater intakes of milk, juice, and fortified cereals than did women who were not WIC clients. However, the difference was not statistically significant. Eggs were consumed with equal frequency.

Gersovitz, M., J.P. Madden, and H. Smiciklas-Wright. (1978) "Validity of the 24-hour Dietary Recall and Seven-Day Records for Group Comparisons." Journal of the American Dietetic Association 73: 48-55.

This study estimated the internal validity (by comparing reported intake with actual intake) of the twenty-four-hour dietary recall and the seven-day record. Data were collected from 65 subjects aged 60 or older at five congregate meal sites in Blair County, Pennsylvania. Subjects were randomly assigned to two groups; one group received twenty-four-hour recalls and the second group completed seven-day records. Trained observers collected information on actual intake.

Comparisons of means indicate that both the twenty-four-hour recall and the seven-day record provide

equally accurate estimates of mean intake. Regression analyses suggest that the recall is prone to overreporting low intakes and underreporting high intakes. Validity of the seven-day record was less prone to such errors for the first few days but accuracy declined on the fifth, sixth, and seventh days.

Hunt, I.F., L.S. Luke, N.J. Murphy, V.A. Clark, and A.H. Coulson. (1979) "Nutrient Estimates from Computerized Questionnaires vs. 24-Hour Recall Interviews." Journal of the American Dietetic Association 74: 656-659.

This study compared nutrient information collected on computerized food frequency questionnaires developed by dentists with data collected in twenty-four-hour recall interviews. Fifty adults (25 men and 25 women) from the UCLA dentistry staff participated in the study. Five successive interviews, using the twenty-four-hour recall, were conducted with each subject. Interviewers used food models and various sized glasses and spoons to assist subjects in judging portion sizes. Means from the five twenty-four-hour recalls were used as standards for each subject, and these data were compared with the results of the computerized food frequency questionnaires. The computerized questionnaires, intended to be completed by patients in dentists' waiting rooms, listed sixty foods of specified portion sizes and asked subjects to indicate the numbers of times per day, week, or month they ate these foods. Space was also available for reporting other foods eaten.

The two methods yielded similar mean estimates for carbohydrate, protein, niacin, and calorie intakes. Analyses of the other nutrients found that intakes as reported on the computerized questionnaires were from 6 to 88 percent greater than the means from the five twenty-four-hour recalls. The proportion of recall estimates falling within 20 percent of the computerized estimates was lowest for vitamin A (17 percent), and greatest for protein (43 percent). True correlation coefficients for carbohydrates, protein, and other nutrients indicated that the twenty-four-hour recall more accurately estimated dietary intake than the computerized food frequency questionnaire.

Krantzler, N.J., B.J. Mullen, E.M. Comstock, C.A. Holden, H.G. Schutz, L.E. Grivetti, and H.L. Meiselman. (1982) "Methods of Food Intake Assessment--An Annotated Bibliography." Journal of Nutrition Education 14(3): 108-119.

This bibliography summarizes eighty-seven publications in both narrative and tabular form. The entries cover a relatively long period in the history of dietary intake studies (1938 to 1981) and include studies of the standard methodologies such as dietary histories and recalls, food frequencies, and mailed surveys in national and international, group and individual studies.

For each study, an abstract summarizes information on study objectives, design, methodology, population, analysis, and results. Tables aggregate much of this information under a variety of headings including method of food intake assessment, method of data collection, and analytic approach.

Madden, J.P., S.J. Goodman, and H.A. Guthrie. (1976) "Validity of the 24-Hour Recall." Journal of the American Dietetic Association 68: 143-147.

This study tested the validity of twenty-four-hour dietary recalls of 76 elderly, non-institutionalized subjects as compared with data on actual food intake collected by five researchers who observed the noon meal at three congregate feeding programs. Foods were weighed before meals were served. Actual intake was determined by subtracting amounts left on plates from average amounts served. Dietary recalls were obtained from study participants within twenty-four hours of the observations. Food models were used to assist with portion size determinations.

Intakes of calories and seven nutrients (protein, calcium, iron, thiamin, riboflavin, and vitamins A and C) were computed for both actual and recalled intakes. Calculations were based on USDA's Nutrient Adequacy Ratios (NAR), which compared the subjects' intakes to current recommended allowances for subject sex and age categories. The mean adequacy ratio (MAR), which is a simple average of the nutrients studied, was also calculated.

Results indicate that the adequacy of the calorie intake was significantly lower for the recalled NAR than for the actual NAR, suggesting that, for this

study group, mean reported intakes underestimate actual intake.

National Academy of Sciences. (1980) Recommended Dietary Allowances. 9th ed. Washington, DC: NAS.

This ninth and latest edition of the RDA standards updates these allowances to reflect current scientific knowledge. These allowances are designed to serve as guidelines for interpreting food consumption records of population groups as well as for evaluating the adequacy of food supplies in meeting nutritional needs and planning food supplies for population groups. In addition, RDAs are used to establish guidelines for: public food assistance programs, development of new food products by industry, and nutrition labeling of foods. Finally, these recommended daily allowances are considered in developing nutrition education programs. It is emphasized that "RDA are recommendations for the average daily amounts of nutrients that population groups should consume over a period of time. RDA should not be confused with requirements for a specific individual." Caution must be exercised when the RDAs are used as the basis for assessing the adequacy of the diets of individuals.

Rasanen, L. (1979) "Nutrition Survey of Finnish Rural Children. Methodological Study Comparing the 24-Hour Recall and the Dietary History Interview." American Journal of Clinical Nutrition 32: 2560-67.

This study evaluated the twenty-four-hour recall method of dietary assessment and the dietary history method as vehicles for obtaining information on nutrition at both the individual and group levels. Children aged five to 13 participated in three groups: 158 children were interviewed using twenty-four-hour recalls, 134 children were interviewed using the dietary history method, and 741 were interviewed using both methods. All sessions were conducted by trained interviewers, and all three groups had repeat interviews (matching the same interviewer with the same child) seven months later. Nutrient and energy intakes for recalls and histories were calculated using data obtained from manufacturers or from Finnish and foreign food composition tables.

Comparisons of individuals' two dietary recalls found a statistically significant difference between the reported intakes of energy and all nutrients, with the exception of vitamin A. Similar statistically significant differences were found between individual histories and between the recall versus history methods. The report concludes that, at the individual level, "...neither method...can be considered suitable for measuring the individual child's dietary intake." The authors recommend precise weighing and/or food recording as more accurate methods of assessment, although they note that these methods are more complicated and demanding of participants.

At the group level, the twenty-four-hour recall had a high level of repeatability: mean intakes of energy and most nutrients were not significantly different between the two recalls. Group means for the two dietary history interviews did differ: all the mean intakes were higher in the first interview. The twenty-four-hour recall is recommended for group studies because it combines a minimum of stress for subjects with results superior to information obtainable in single interviews.

Reaburn, J.A., M. Kronl, and D. Lau. (1979)
"Social Determinants in Food Selection." Journal
of the American Dietetic Association 74: 637-41.

In order to examine the influence of social factors on food selection, interviews were conducted with 112 low-income urban homemakers, who were asked about food-use frequency, availability, price, convenience, and prestige values of 52 common food items. A five-point, fixed alternative scale was used to systematically measure each social determinant. Other analyses identified associations between food-use frequencies and each social determinant.

Results indicate that significant correlations exist between food-use frequencies and convenience, price, and prestige. The increased convenience of foods was significantly related to increased use while price decreases were significantly related to increased food use. An increase in the perceived prestige value of foods was significantly related to increased use of those items.

The promotion of foods on the basis of "high nutritive value" will not necessarily be related to improved nutritional habits given the influences of other social determinants, including factors not studied here such as taste, familiarity, and family preference.

Sorenson, A.W., B.M. Calkins, M.A. Connolly, and E. Diamond. (1985) "Comparison of Nutrient Intake Determined by Four Dietary Intake Instruments." Journal of Nutrition Education 17(3): 92-99.

This validation study examined the relative nutrient intakes obtained from 50 adults using four intake assessment instruments: twenty-four-hour recall, two-day diet history, modified diet history, and a quantitative food frequency questionnaire.

The highest estimated nutrient intakes were obtained from the food frequency questionnaire. The modified diet history provided the second highest intake estimates. The authors suggest that respondents overreport intakes on food frequency questionnaires because respondents feel compelled to provide responses to the many categories of foods on such checklists. Other methods rely on respondent recall of foods eaten and may lead to the underestimation of actual intake.

Stuff, J.E., C. Garza, E. Smith, B.L. Nichols, and C.M. Montandon. (1983) "A Comparison of Dietary Methods in Nutritional Studies." American Journal of Clinical Nutrition 37: 300-06.

Dietary intakes of 40 lactating women were obtained using one-day, three-day, and seven-day records and a newly developed food frequency form (FFF). The FFF, devised to quickly and semi-quantitatively ascertain typical food and nutrient intakes, listed 105 food items. Subjects reported on intake amount and frequency for these items. Participants were allowed to add items to the list.

Comparison of the results indicated that the three-day-record was the most reasonable approach to obtaining quantitative nutrient intake data for groups. However, the authors conclude that because of intraindividual variations, it is necessary to use a seven-day-record to accurately predict individual intakes.

Anthropometry

Brabin, L., B.J. Brabin, and L. Libbon. (1984) "Referral of Children for Nutritional Interventions in an Under-five Clinic: Would Weight-for-Height Assessment Help?" Journal of Tropical Medicine and Hygiene 87(2): 91-7.

This study investigated decision-making in an under-five clinic by examining the referral of children for nutritional help on the basis of weight-for-age assessments. The weight-for-age status of each child was compared with weight-for-height status. Children with a weight-for-height status of less than 89 percent and who were still failing to gain weight were considered "at risk" and in need of referral. Of 28 such children, only four were referred.

It is suggested that community health nurses may experience problems in interpreting the trend of a child's growth curve, possibly because the information is inadequate or because they fail to correctly interpret these data.

The study also considered whether incorporating a weight-for-height assessment into the clinic routine would increase the efficiency of nutritional intervention. There appears to be no obvious advantage if children's ages are known and the majority of children are not severely malnourished. The emphasis should be on training staff, not on new techniques.

Davis, D.P., and T. Williams. (1983) "Is Weighing Babies Worth While?" British Medical Journal 286: 860-63.

This study reports that staff in health clinics often apply inadequate or inappropriate techniques when they weigh babies. Health workers thus fail to catch unexpected weight loss or gain. Unreliable techniques, insufficient use of growth charts, limited understanding of normal variation in weight gain and misunderstanding of nutritional influences on weight gain, all contribute to these often inadequate weighing practices and interpretations.

Davis and Williams conclude that to interpret a child's weight reliably, weight must be compared to a standard reference using a growth chart. Further, they encourage nutritional surveillance

during developmental periods when interpreting weight changes in children is most difficult.

The authors stress that babies should be weighed at regular intervals to detect excessive weight loss or gain, and they suggest that an often-overlooked asset of growth chart use is the opportunity it provides for mothers to express their concerns.

Moore, W.M., and A.F. Roche. (1982) Pediatric Anthropometry. Columbus, Ohio: Ross Growth and Development Program.

The authors describe the guidelines developed by the Centers for Disease Control (CDC) for measuring physical growth, including weight, length, stature, head circumference, and triceps skinfold thickness. These standards were designed as screening procedures to determine the health and nutritional status of children. This report includes a careful description of techniques for accurately performing these measurements as well as instructions for recording, plotting, and interpreting the measures using National Center for Health Statistics (NCHS) reference data. Examples of accurately plotted NCHS growth charts with corresponding interpretations are also presented.

United States Department of Health and Human Services, Public Health Service, Centers for Disease Control. (1985) Nutrition Surveillance 1983. Atlanta: USDHHS.

This report summarizes information, including selected indices of nutritional status, from 29 States and the District of Columbia as reported to the Nutritional Status Surveillance System coordinated by the Centers for Disease Control. The system has two components, one addressing nutritional status among high-risk pediatric populations and the other addressing nutrition status among pregnant women from generally low-income, high-risk groups. This surveillance system is currently expanding its data base by increasing the number of participating States and by adding a broader range of nutritional status indices. CDC has indicated that subsequent tabulations will be presented in the same format to facilitate the comparison of data from year to year. Because of the lack of uniformity of data sources and methodology, the CDC

cautions against direct comparisons between and among States.

United States Department of Health and Human Services, Public Health Service, Centers for Disease Control, Nutrition Division and Health Services Administration, Bureau of Community Health Services. (1981) A Guide to Pediatric Weighing and Measuring. Atlanta: USDHHS.

This guide presents protocols for measuring the weight, length, and height of children. Accuracy, proper choice, and preparation of equipment along with correct preparation and positioning of the child for measurement are emphasized. Each protocol is clearly outlined with step-by-step instructions.

Nutrition Education

Bowering, J., R.L. Lowenberg, M.A. Morrison, S.L. Parker, and N. Tirado. (1978) "Influence of a Nutrition Education Program (EFNEP) on Infant Nutrition in East Harlem." Journal of the American Dietetic Association 72: 392-97.

This effort, which was part of the Expanded Food and Nutrition Education Program (EFNEP), had three objectives: encouraging formula consumption (rather than consumption of whole cow's milk) during the first six months of infancy; increasing the variety of infant foods offered to babies aged six to eighteen months; and reducing the risk of iron-deficiency anemia. The evaluation considered changes in food consumption and iron status resulting from the provision of additional program services and nutrition education to EFNEP participants. The sample included 118 infants (from birth to eighteen-months) and their mothers in East Harlem who were clients of a well-baby clinic. Of the 118 study participants, 61 received standard clinic services, while 57 clients received the same clinic services along with additional assistance and nutrition education provided by nutrition aides during home visits. A twenty-four-hour dietary recall was used to assess changes in intake of formula and cow's milk; hemoglobin measures tested changes in iron status.

No statistically significant differences were found in milk consumption patterns for the comparison and extra-service groups. However, the group receiving

special services from nutrition aides was more likely to use formula, had better hemoglobin levels (16 percent had low levels versus 23 percent for the comparison group), and increased the variety of foods offered and consumed by infants.

Cerqueira, M.T., E. Casanueva, A.M. Ferrer, G. Fontanot, A. Chavez, and R. Flores. (1979) "A Comparison of Mass Media Techniques and a Direct Method for Nutrition Education in Rural Mexico." Journal of Nutrition Education 11(2): 133-37.

This study tested the effectiveness of mass media presentations on nutrition education relative to direct, face-to-face nutrition education (two two-hour group sessions per week for three weeks). No significant differences were found between the media group and the traditional group with regard to knowledge about nutrition and nutritional status.

Contento, I. (1980) "Thinking About Nutrition Education: What to Teach, How to Teach it, and What to Measure." Teachers College Record 81(4): 421-447.

This article reviews the content, teaching methods, and evaluation criteria used in the United States, to guide nutrition educators in the selection of materials offered by commercial, government, and academic sources. Materials designed to convey facts are usually based on a nutrient-oriented approach--leaving food choices to the learner, or they focus on specific foods or food groups. Through the 1960s and 1970s, formal nutrition education focused on information transfer only, while the food industry focused on promoting behavioral change. In the late 1970s, educators began to promote behavioral change through problem-solving approaches, behavior modification, and other social learning techniques, such as role modeling. Programs are being evaluated not only on the basis of information gains, but also to measure attitudinal and behavioral changes, as well as to identify and measure improvements to nutritional status. Behavioral changes are measured using food intake diaries, observations of food consumption, changes in school vending machine sales, or plate waste studies. Changes in attitudes and food

preferences are measured using food preference scales based on individual food items, various vegetables, and whole menus. Attitude measures, such as the Likert scale, have been adapted from the social sciences. The most commonly used method for measuring change in nutritional status is weight change.

Goodrich, N., C. Wehner, L. Richman, and C.M. Dayton. (1986) Report on WIC Nutrition Education Services. Study of WIC Program and Participant Characteristics. Washington, DC: Ebon Research Systems.

This report on nutrition education is one part of a national study of WIC participant and program characteristics. This descriptive review of nutrition education in WIC focused on the types of nutrition education services offered by State and local WIC agencies and the use of those services by program participants. Questionnaires were mailed to 28 State agencies, 1,293 local WIC coordinators, and 316 local nutrition education coordinators. More than 6,000 active client records were received.

Major findings include: participants generally receive about two nutrition education contacts during the first certification period with a decrease in contacts during subsequent certification periods; the primary modes of presenting nutrition education are individual and group counseling sessions and use of printed materials (pamphlets or posters); mean session length is 16 minutes for individual sessions and 26 for groups; and lack of staff time and participant interest are perceived (by staff) to be the leading constraints to the provision of nutrition education.

Gaman, E. (1976) "A WIC Pilot Program with Nutrition Education." Journal of Nutrition Education 8(4): 157-8.

In 1974, the Drew Medical Dental Center in East Palo Alto, California conducted a nutrition education pilot project for WIC. Education programs were informal and conducted on a one-to-one basis for the first month with clients placed in groups of two or three for the second month. The sessions focused on explanations of the WIC program objec-

tives. An informal evaluation found that voucher distribution was the time most conducive to effective teaching and that printed materials distributed without some form of instruction were "largely valueless" and often discarded.

Recommendations included: teaching a limited number of topics; preparing sample dishes for clients to taste; and emphasizing "who WIC foods were meant for" because most families share these supplemental foods.

Healthwise, Inc. (1980) WIC Nutrition Education Evaluation, Final Report. Boise: Idaho Department of Health and Welfare.

The major objective of this in-depth evaluation of Idaho's Central District Health Department WIC clinic was documenting current nutrition education activities and assessing their effectiveness. Data were obtained from client-completed questionnaires through client and staff interviews, and through observations of nutrition education sessions.

The results indicated that client intake of iron and vitamin C increased and that client knowledge about nutrition had increased. While clients knew more nutritional facts, they had not learned how to use them. Attitude improvements included increased client willingness to be responsible for their families' nutrition and health, although most clients did not accept the premise that good health depends on good nutrition, except as it related to specific nutrient deficiencies. Clients were buying more fruits and vegetables but had not changed their other practices in meal planning and preparation or food shopping. Health status changes included improvements in children's growth status (based on the height/weight relationship), decreased rates of anemia in children, and less illness and more "energy" among other clients. Clients were satisfied with the nutrition education services; however, they wanted more involvement and interaction in class.

McLaughlin, E.C., J. Randell, M. Mower, and M.J. Kiefer. (1982) Nutrition Education Resource Guide: An Annotated Bibliography of Educational Materials for the WIC and CSF Programs. Bibliographies and Literature of Agriculture, Number 24. Washington, DC: United States Government Printing Office.

This resource guide, which includes print and audiovisual nutrition education materials, was developed for use by State and local staff of the Special Supplemental Program for Women, Infants and Children (WIC) and the Commodity Supplemental Foods Program (CSFP). Information in the guide is to aid in selecting, acquiring, and developing accurate and appropriate materials for nutrition education for WIC/CSFP participants. Each entry provides an abstract, appraisal, and descriptors as well as information on title, author, source, format, reading level (when applicable), availability and cost.

The abstract is an objective description of the resource, while the appraisal focuses on the strengths and weaknesses of the item especially as it relates to content, format, and audience suitability. The descriptors are key words that allow a search of AGRICOLA (The National Agriculture Library's computerized bibliographic data base). All materials in the guide can be borrowed from the Food and Nutrition Information Center (FNIC) at USDA.

An extensive appendix provides guidelines for evaluating nutrition education materials, explaining criteria such as the literacy formula used in the materials evaluations for this volume, so readers can use the FNIC system to evaluate other materials. The evaluation guidelines incorporate literacy, language, ethnic groups, target audience(s), intended use, and some objective ratings elements, such as writing style, format, print size, and use of illustrations. Sources used in developing the guidelines were provided by the Society for Nutrition Education, the Nutrition Information and Resource Center at Pennsylvania State University, and the North Carolina Nutrition Education Clearinghouse.

McNaughton, J. (1983) "Nutrition Intervention Programs: Pitfalls and Potential." Ceres 16(2): 28-33.

This article informally reviews the role of various nutrition interventions in the improvement of children's nutritional status. McNaughton writes that nutrition education often fails because it ignores good communications principles or because it is applied to inappropriate situations, such as lack of access to needed foods. The author concludes that it is important to teach mothers about nutrition because maternal decisions, attitudes, and behaviors affect their children's health status and food habits. She further argues that it is also important to reach young school children on the subject of nutrition while they are still forming their lifelong health and eating habits.

Nestor, J.P., and J.A. Glotzer. (eds.) (1981) Teaching Nutrition: A Review of Programs and Research. Cambridge, Mass: Abt Books.

This review, compiled under the aegis of the National Nutrition Education and Training Program, presents information on nutrition education for preschool, elementary, and high school children; for teachers; and for school food service personnel. Additional chapters describe various evaluation methodologies for nutrition education programs and present a conceptual framework for conducting nutrition education activities. The framework focuses on the knowledge-attitude-behavior-status format but notes that the relationships among these stages are not causal. The authors conclude that, in 1980, nutrition education was not a well-organized field and was in need of methodological guidelines for program development and evaluation. They also note that many programs and agencies operating nutrition education programs were not well-organized or coordinated.

Orr, R.D., and J.J. Simmons. (1979) "Nutritional Care in Pregnancy: The Patient's View. Perceptions, Satisfaction, and Response to Dietary Advice and Treatment." Journal of the American Dietetic Association 75(2): 131-136.

Ninety-two pregnant women attending the out-patient clinic of a major obstetrical teaching hospital

were interviewed to obtain information on their perceptions of diet during pregnancy, responses to dietary advice, and satisfaction with the types and amounts of dietary information they received.

Almost all subjects considered diet to be important during pregnancy. Prenatal dietary advice was perceived as somewhat restrictive, and, for approximately a third of the subjects, compliance with dietary advice was a serious concern. Most subjects indicated that they made some dietary changes during pregnancy, usually as a result of the advice they received. Poor compliance was reported with iron supplementation, and many of the women attributed adverse symptoms to this medication. Subjects appeared more satisfied with the amount than the type of dietary advice received, and negative or noncommittal attitudes toward nutrition services were expressed by half the subjects. Feelings of guilt, attitudes of other professionals, and perceived difficulties of complying with dietary instructions were the major reasons given for these negative feelings.

Rescheduling and better integration of nutrition services with prenatal visits are suggested to improve patient satisfaction with dietary counseling. These changes would encourage patients to see nutrition counseling as a routine and necessary aspect of prenatal care, rather than as an unimportant, auxiliary, or even punitive adjunct to medical care.

Orr, R.D., and J.J. Simmons. (1979) "Nutritional Care in Pregnancy: The Patient's View. Perceived Need for Advice and Effectiveness of Advice Received." Journal of the American Dietetic Association 75(2): 136-40.

As described in the preceding entry, interviews were conducted with ninety-two pregnant women who were out-patients at the obstetrical clinic of a major teaching hospital. Information was obtained on patient perceptions of their need for dietary advice during pregnancy, and data were collected on selected demographic, nutritional, and medical care characteristics. Clients were also asked about their responses to, and satisfaction with, the dietary advice and treatment they received.

Patients' perceived need for dietary advice appears to be an important factor in the apparent effec-

tiveness of prenatal nutritional counseling. Patients who said they needed advice on diet and nutrition were more likely to consider diet important during pregnancy, to have positive feelings toward nutrition services, to have visited the dietitian, and to report making changes in their diet because of advice received. Little association was observed between client demographic and medical care characteristics or more objective measures of need for dietary advice and patients' perception of need. The authors suggest that patients whose expressed need for counseling is at variance with objective measures are a group requiring special attention.

Save the Children Federation (SCF). (1982) Bridging the Gap: A Participatory Approach to Health and Nutrition Education. Westport, Conn: SCF.

A participatory approach to health and nutrition education involves community members in the identification, definition, and solution of community health and nutrition problems. Objectives include fostering community commitment to problem solution and encouraging the expression of hopes for future activities. This handbook describes simple techniques for training staff, increasing community awareness, identifying problems, conducting workshops, developing materials, evaluating programs, and planning for the future.

Torillo, A.D. (1976) "The Potential for Nutrition Education." Journal of Nutrition Education 8(4): 156-57.

This commentary describes the background and objectives of the WIC nutrition education program through 1976. In particular, the article includes: a description of the pilot program (from 1972-1975); an outline of the operational program plan and justification for that plan; and a presentation of the policies of State and local agencies evaluating nutrition education programs.

The author concludes that, unlike earlier supplemental food programs, WIC "has become something more than a food delivery program." A commitment to alter nutrition behavior, a major feature of WIC legislation, has led to specific goals and recommended educational content areas for WIC. She

lists as key principles for WIC nutrition education: thorough integration of nutrition education with the overall WIC program; understanding the recipient's individual needs and resources; educational messages that are simple and applicable; and ongoing evaluation of nutrition education.

United States Department of Agriculture, Food and Nutrition Service. (1980) Southeast Asian American Food Habits. Washington, DC: USDA.

This series of pamphlets addresses the nutritional needs of Southeast Asians who have recently immigrated to the United States. WIC and CSF are identified as appropriate programs through which Southeast Asians can learn about American food habits. Emphasis is placed on monitoring WIC nutrition education to include specific cultural differences. The need for WIC staff to learn about Southeast Asian food traditions and habits is stressed, and the incorporation of WIC foods into traditional dishes is encouraged.

Young, S., and N. Crane. (1981) Synopsis of the Nutrition Education Portion of Fiscal Year 1981 State Plans for the WIC Program. Washington, DC: United States Department of Agriculture, Food and Nutrition Service.

This document describes innovative and traditional approaches to nutrition education as described in selected State WIC Program plans. The synopsis is based on the six State Agency areas of responsibility in nutrition education listed in federal WIC regulations. Examples are either brief descriptions of programs or excerpts from the various State plans. Samples of participant questionnaires and local agency review forms are included in the appendix.

II. WIC PROGRAM MANAGEMENT

WIC Program Operations Austin, J.E., and C. Hitt. (1979) Nutrition Intervention in the United States: Cases and Concepts. Cambridge, Mass: Ballinger Publishing Company.

Employing a case study methodology, the authors examine the evolution of U.S. domestic food policies and programs. Two of the cases concern the WIC Program. The first presents information on the design and implementation of WIC at the federal level. The "decisionmaker" role in this case study is the WIC director at the Food and Nutrition Service (USDA) who faced intervention design issues concerning medical evaluation, nutrition education, the food package, and participant eligibility criteria.

The second case presents an in-depth description of a WIC program in a Boston neighborhood (Uphams Corner). This case focuses on program origins and implementation at the local level. The authors trace the evolution of the program from its initiation in 1974. They describe decisions on registration, delivery systems, and nutritional assessments and identify key administrative problems, specifically funding delays and the 10 percent limit on administrative funds. The information was gathered via interviews with the local WIC coordinator and the WIC nutritionist. Detailed tables of demographic and administrative information are also presented.

Bendick, M., T.H. Campbell, D.L. Bawden, and M. Jones. (1976) Efficiency and Effectiveness in the WIC Program Delivery Systems. Washington, DC: United States Department of Agriculture, Food and Nutrition Service.

This study was conducted in 1975--two years after the implementation of WIC--to describe methods of implementation and to identify efficient and effective methods. The survey of 96 WIC clinics and 3,600 WIC participants incorporated both face-to-face interviews and mailed questionnaires. Data were collected on all aspects of WIC operations, including: clinic characteristics, participant characteristics, outreach, WIC foods, nutrition education, medical care utilization, costs, and

operational factors. Information from this study was used to modify program regulations and procedures, such as clarifying eligibility criteria and improving the effectiveness of nutrition education efforts.

By interviewing staff from four successful WIC nutrition education programs (defined in terms of clients' response that they had learned something) and contrasting this information with the results of unstructured telephone interviews with administrators of unsuccessful programs ("not a single participant...indicated that she had learned anything") and matching for clinic and client characteristics, the study derived principles associated with success.

- Nutrition education should be thoroughly integrated into the WIC Program.
- Nutrition education programs must incorporate an understanding of the general lifestyles of recipient populations as well as the day-to-day situations and problems of these households in order to relate counseling to their needs.
- Nutrition educators should suggest marginal changes rather than radical ones. For example, recipes should be similar to familiar ones. Lessons should be simple and concrete and useful to WIC clients.

The authors note that most of these principles are recognized by EFNEP (the Expanded Food and Nutrition Education Program), which works principally with low-income homemakers.

General Accounting Office. (1979) The Special Supplemental Food Program for Women, Infants, and Children (WIC)--How Can It Work Better? Washington, DC: GAO.

This GAO study looked at WIC programs in four States and also considered five local WIC programs (two urban, two rural, one suburban) to examine whether or not actual operations met program objectives.

Improvements were suggested in the following operational areas:

- health referral systems. In some programs, health services were not available or clients were not assured that services would be available.
- nutritional risk assessments. Some local WIC clinics did not perform these assessments. Also, the GAO noted a lack of uniform criteria among States for determining nutritional risk.
- food package description. Many local programs did not tailor food packages to meet recipient needs.
- nutrition education. The GAO found that many State and local agencies placed a low priority on the provision of nutrition education to WIC clients.
- program evaluation. Almost no instances of program quality evaluation by States or locals were identified during this study.

The report provides detailed explanations of the identified problems along with descriptions of GAO's suggested solutions. USDA responses to the recommendations are also presented.

Isely, R.B. et al. (1981) Evaluation of the Special Supplemental Food Program for Women, Infants, and Children (WIC): Evidence from the Literature (Chapter 3 of Evaluation of the WIC Program, Predesign Activities, Phase 1 Final Report). Research Triangle Park, NC: Research Triangle Institute.

This literature review, one component of the design phase of the National WIC Evaluation, focuses on outcome measures of program effectiveness, including relationships between maternal nutrition, pregnancy outcomes, and nutrition interventions; the relationships between nutritional status in infancy and childhood and health and developmental outcomes; the effects of nutrition education on attitudinal and behavioral outcomes; and methods of

measuring dietary intake. Brief sections address contextual variables (health beliefs, cultural and political concerns, the food industry) and the assessment of service delivery. The final section summarizes and critiques fourteen completed evaluations of the WIC program which focused on health and nutrition outcomes as well as six administrative and descriptive evaluations.

The bibliography lists approximately 450 items covering a wide range of topics, including the health and nutrition status of low-income populations, the relationships between nutrition status and infection, and guidelines for obstetric practice.

National Advisory Council on Maternal, Infant, and Fetal Nutrition. (1981) 1980 Biennial Report. Washington, DC: United States Department of Agriculture, Food and Nutrition Service.

The National Advisory Council studies WIC operations as well as related programs such as the Commodity Supplemental Feeding Program (CSFP) to determine areas of program administration and operation that need improvement. Council members include WIC State and local directors and participants, an obstetrician, representatives of advocacy organizations, and representatives from other health and nutrition programs such as the CSFP.

Recent recommendations included:

- Increase funding to allow the WIC and CSF Programs to serve at least 50 percent of those eligible;
- Improve administrative efficiency by reducing duplication of efforts such as certification of food programs and health agencies;
- Increase funding for health care programs to enable them to meet the increased demand generated by increased participation in food programs;
- Explore alternative methods to ensure quality nutrition education, other than requiring that one-sixth of administrative funds be spent for

nutrition education because this requirement is an administrative burden;

- Tailor nutrition education to the needs and interests of various cultural groups;
- Increase federal technical assistance for CSFP and WIC, especially in nutrition education and warehousing;
- Simplify procedures for reimbursing vendors and provide technical assistance;
- Evaluate States' retail food delivery systems, particularly in the areas of retailer management and monitoring;
- Increase funding for migrant services; and
- Provide a definition of "migrants" that would be used nationally.

Richman, L., T. Hidlebaugh, L. Ku, N. McMahon-Cox, C.M. Dayton, and N. Goodrich. (1986) Final Report: Study of WIC Program and Participant Characteristics. Washington, DC: Ebon Research Systems.

The WIC Program and Participant Characteristics Study, conducted under contract to the U.S. Department of Agriculture, reported (for a cross-section of WIC programs and participants) on WIC services and policies and on client characteristics. Data were collected using mail surveys of a national sample of 28 State WIC Agencies and 204 local agencies. A nationally representative sample of 6,444 client records was also reviewed.

About one-fourth of all participants were women, half of whom were pregnant; one-fourth were infants; and half were children one-to-four years old. Three-fourths of the participants were in one of the first three of the six federal risk categories.

About two-thirds of WIC participants had incomes below the poverty level; 86 percent were below 130 percent of the poverty level. Mean household size

was 4.1 persons; pregnant women had smaller households (3.3 persons) and children three-to-four years old lived in larger households (4.6 persons).

About half of the participants were white, one-third were Black; 17 percent were Hispanic, and 4 percent were Asians or American Indians. This distribution was similar for all participant categories, except that more breastfeeding women were white and more postpartum women were Hispanic.

Participants must be certified based on health or nutrition risks: 43 percent of clients' records indicated a medical or health risk, 38 percent had a dietary risk, and 35 percent had an anthropometric risk. The most used method of assessing diet was the twenty-four-hour recall; food frequency checklists were also common. Most evaluations of recorded intakes were based on comparisons with the basic four food groups. About 25 percent of participants were anemic, as indicated by hemocrit values. Low values were most common among postpartum and breastfeeding women and older infants.

Two-thirds of the WIC service sites provided health care services; almost half provided referrals to other services, including the Food Stamp Program, family planning, AFDC, and Medicaid.

Foods provided by WIC account for about 80 percent of program costs. Tailoring food packages (giving less than the maximum allowable amount of food) was common, although reductions were usually small. For example, about 63 percent of women and children received less than the maximum allowable amount of milk, but they received an average of 90 percent of the permissible amount. For other items, maximum amounts were provided for the majority of participants.

Rush, D., et al. (1986) Evaluation of the Special Food Program for Women, Infants, and Children (WIC): Volume I: Summary. Research Triangle Park, NC: Research Triangle Institute

This volume presents a brief nontechnical overview of the National WIC Evaluation's four components: the Historical Study of Pregnancy Outcomes, the Longitudinal Study of Pregnant Women, the Study of Infants and Children, and the Food Expenditures Study. The historical study was based on data

provided by State WIC Programs on women who had participated in their programs between 1972 and 1980, and State vital records on births and infant deaths between 1972 and 1980. The remaining three studies gathered data from 174 local WIC clinics and 55 health clinics not operating WIC programs. The report presents study findings by types of effects the WIC program may have on participants' health and nutritional status.

Analysis of information on dietary intake found that pregnant women participating in WIC had greater intakes of many important nutrients, but not of vitamin A; these improvements were attributable to higher quality of their diets (in terms of nutrient density) rather than increases in overall intakes, although calorie intakes also improved. The benefits were attributed to foods in WIC packages. WIC benefits were also related to improved diets of participating infants and children. WIC benefits received during pregnancy were associated with increased mean birthweight, which is consistent with the findings of other studies of supplementation during pregnancy, but the analysis could not separate the effects of the food supplement from the possible effects of other WIC benefits, such as improved perinatal care.

WIC participants gained less weight during pregnancy than did controls, but they gained the same amount between WIC enrollment and followup, suggesting that an early disparity in weight gain was reversed by WIC enrollment. WIC participation during pregnancy had no significant effect on hemoglobin concentration. Fetal and neonatal mortality rates were lower among WIC participants.

WIC participation was also associated with reduced rates of inadequate health care and higher immunization rates.

The Food Expenditures Study found that WIC participants spent (in cash, WIC vouchers, and food stamps) more money on WIC-type foods than did non-WIC families, although total food expenditures did not differ significantly. The value of the WIC foods thus represented a substitution rather than a sharing of WIC benefits. Families of WIC participants spent less on meals away from home, possibly indicating increased family budgeting efficiency and more nutritious diets, a finding consistent with the observed effects of WIC participation on nutrient intakes.

United States Department of Agriculture, Food and Nutrition Service. (n.d.) Evaluating the Nutrition and Health Benefits of the Special Supplemental Food Program for Women, Infants, and Children. Washington, DC: USDA.

This report summarizes eight nutrition evaluations conducted under the aegis of the Food and Nutrition Service. Each evaluation is described in detail, providing information on study objectives, design, methodology, and findings. Included in this report are:

- The Ten-State Nutrition Survey (1967) was designed to determine the degree and geographical distribution of poor nutrition and health status among low-income groups in the United States.
- A Study of Nutritional Status of Preschool Children in the United States (1968) was a cross-sectional study of the nutritional status of children aged one to six years.
- The Health and Nutrition Examination Study (HANES, 1971), through continuous monitoring, examined the nutritional status of the United States population, from birth to age 74.
- Nutrition Surveillance Program of the Centers for Disease Control (1973), another on-going monitoring effort, collects data (from State health departments) about specific nutrition problems experienced by lower socioeconomic groups in the U.S.
- State Nutrition Surveillance Program--An Evaluation of a State WIC Program (1972), conducted in Louisiana, identified trends in indicators of nutritional status of lower socioeconomic groups, using data collected by WIC and other State health programs.
- An Evaluation of the WIC Program Delivery Systems (1975) examined management effectiveness and efficiency of selected State and local WIC delivery systems.

- A Medical Evaluation of the WIC Program (1975) studied the impact of the WIC program on selected indicators of nutritional status.

United States Department of Agriculture, Food and Nutrition Service. (1985) WIC: Focus on Management. Guidance to Working Subcommittee on Vendor Management, Caseload Management and Administrative Cost Management. Washington, DC: USDA.

This report presents the results of a preliminary meeting of the WIC: Focus on Management Steering Committee of the National Association of WIC Directors (NAWD) conducted to develop standards of practice, while considering effectiveness and efficiency of management practices, in three WIC program areas: vendor management, caseload management, and administrative cost management. A shell matrix of suggested practices is presented for the three areas with a listing of processes and desired outcomes, to be used by the subcommittees in developing specific standards of practice through which the processes can be managed to achieve the outcomes listed. The report also includes lists of Subcommittee members and a timetable for preparing the Focus on Management report.

United States Department of Agriculture, Food and Nutrition Service. (n.d.) WIC Participant Profile Survey. Washington, DC: USDA.

This study collected background information on WIC programs and participants in order to address specific administrative issues frequently raised in discussions of possible program change. In February 1978, 147 local WIC clinics were sent questionnaires (included as exhibits to this report) to obtain the data presented here. Profiles were drawn to reflect urban and rural differences, and American Indian services were categorized as direct or nondirect based on whether they operated independently as State agencies or through other State agencies.

Client profiles included income, employment, education, length of participation in WIC, use of health care services, and media access such as television watching and newspaper reading for use in planning client outreach activities.

Clinic profiles described 97 clinics in terms of size, available health care services, income and nutritional risk eligibility criteria, nutrition education activities, and proportion of clients contacted.

The study concludes that WIC foods are reaching clients who are in need based on their income and nutrition status. However, further study of nutrition education was recommended because clients in all clinic categories were not receiving nutrition education services described in program regulations.

United States Department of Agriculture, Food and Nutrition Service, Midwest Regional Office.
(1985) Caseload Management Process Standards.
Chicago: MRO.

The Caseload Management Subcommittee of the National Association of WIC Directors met to create standards for good case management as part of the WIC: Focus on Management. The committee established six caseload management outcomes which served as a basis for developing performance standards and "enhancement" actions for the States to follow: a maximum number of eligible persons are served with the available grant; program benefits are targeted to the highest risk eligibles; eligibility is properly determined for all applicants; positive relationships are maintained with participants, health care providers, and the community; services are provided by the most appropriate local agencies in service areas; and a stable level of caseload is maintained.

Based on these guidelines, the committee developed processes and specified measurable objectives to help States arrive at the desired outcomes. For example, they recommended that all States maintain data bases on WIC participation by client category and by priority.

United States Department of Agriculture, Food and Nutrition Service, Supplemental Food Programs Division. (1985) WIC Directory of State Directors. Washington, DC: USDA.

This listing, by region and State, provides the names, addresses, and telephone numbers of directors of State WIC Agencies, including the Indian agencies.

WIC Administrative Funds Management

General Accounting Office. (1985) Need to Foster Optimal Use of Resources in the Special Supplemental Food Program for Women, Infants and Children; Report to the Secretary of Agriculture. Washington, DC: GAO.

In its review, the GAO examined the extent to which WIC benefits were targeted to participants, the stringency of eligibility assessments, and the impacts of funds allocation and reallocation procedures on State and local agency operations. Secondary data were collected at three regional WIC offices and four local agencies in five States.

The GAO concluded that management improvements were needed to obtain maximum benefits from WIC resources. Suggested improvements included: targeting WIC benefits to the highest risk groups (pregnant and breastfeeding women and infants); applying more stringent and uniform nutritional risk criteria; and changing current federal allocation procedures so that State agencies can "carry over" to the next fiscal year their unspent WIC funds. The report stated that existing reallocation procedures contribute to disorderly and carelessly considered program expansion, which is not conducive to targeting high-risk populations.

Ku, L. (1985) Structural Characteristics Affecting Administrative Costs in the WIC Program (Draft). Washington, DC: United States Department of Agriculture, Food and Nutrition Service.

Ku examined factors affecting average administrative cost per participant using data from 84 State WIC programs from FY1983. He found that higher State participation, number of clinics per local agency, and participation per clinic were significantly related to lower administrative costs.

Caseload composition and geographic characteristics did not have significant effects. The author notes that changes which may affect the efficiency of operations also need to be viewed in the context of their effects on quality of services provided to WIC clients.

United States Department of Agriculture, Food and Nutrition Service. (1985) WIC Program State Plan Budget Summary, Fiscal Year 1985. Washington, DC: USDA.

This report presents financial data for all State WIC Agencies for FY1985, with comparisons to figures for FY1983 and FY1984. Disaggregated information is presented on salaries, data processing, direct and indirect costs, and in-kind contributions. Administrative costs (for salaries, data processing, direct and indirect costs) are also presented by region. Other tables display staffing and participant levels by State along with State client:staff ratios. The document also discusses trends in funds allocations within and between categories during the past three fiscal years.

United States Department of Agriculture, Food and Nutrition Service, Mid-Atlantic Regional Office. (1985) Survey of Major Administrative Costs for Fiscal Year 1984 (SMAC/84). Trenton: MARO.

This report presents, principally in tabular form, analyses of WIC administrative expenditure data reported by the seven States in USDA's Mid-Atlantic region. Cost categories are broken down in detail, particularly for banking and data processing services; differences among States are discussed in the text. A one-page summary of observations and trends notes that, in 1984, total administrative costs increased 20 percent over FY1983, as did participation rates. Salaries and benefits accounted for 62.5 percent of the region's administrative expenditures due to increases in numbers of staff, salary and benefit increases, inflation, and greater utilization of professionals; most staffing increases occurred at the local level. Additional salary costs may be included in the subcontracted services category. Developmental costs for data processing decreased, but the new

systems were more expensive to operate in FY1984. The survey instrument is included as an appendix.

United States Department of Agriculture, Food and Nutrition Service, Special Supplemental Food Program for Women, Infants, and Children. (1978) WIC Administrative Cost Report. Washington, DC: USDA.

This comprehensive description of the status of WIC Program operations emphasizes administrative costs and service delivery systems. Data were collected from 62 State Agencies and 146 local agencies during October and November 1977. Findings were reported in the areas of: administrative costs, including allocation and measures of in-kind contributions; staffing, including measures of staff time by service areas and types of staff by task; estimates of time devoted to job-related training; an analysis of data processing functions; and administrative "needs" of State programs.

Among the recommendations were that funding should be provided separately for administrative and food costs; that the USDA and the States should develop consistent program terminology; that States should be required to justify the proportion of federal funds retained at the State level; and that the Secretary should define and require specific minimum nutrition education services, whether or not separate nutrition education funding is provided, to prevent nutrition education from being contingent on the adequacy of funding for other administrative costs.

III. General Program Management

Management of Public Organizations

Bardach, E. (1977) The Implementation Game. Cambridge, Mass: The MIT Press.

Bardach presents case studies to show how even the most carefully designed program or policy can go awry during actual implementation. The problems he discusses affect most public programs and include pressure group politics, diversion of resources, collective decision-making, and administrative control in the organizational hierarchy. Learning what can go wrong may help managers devise and implement strategies to avoid such problems.

Barrell, V., and E. Arditl. (1983) "A Planning Cycle in the Development of a Community Health Program." Israeli Journal of Medical Science 19(8): 742-7.

The planning cycle described in this article includes situation analysis, formulation of objectives, strategy selection, development of an operational plan, implementation, and evaluation. Application of these activities leads to a new situation analysis. The primary aims of the program under study were to reduce the infant mortality rate in an Israeli town to the level prevailing in the rest of the geographic area and to promote continuity of care and proper medical management during pregnancy, delivery, and infants' first year of life. The authors point out problems during implementation, especially coordinating and integrating the several participating medical facilities and the difficulties of developing appropriate informational tools.

Berkley, G. (1975) The Craft of Public Administration. Boston: Allyn and Bacon, Incorporated.

This volume is a "textbook" on public administration. Berkley includes chapters on organizational theory, motivating subordinates, personnel management, leadership, communication and control, public relations, and the management of change.

Brown, R. (1966) Judgment in Administration. New York: McGraw-Hill Book Company.

As a practicing program administrator, the author focuses on the intangible side of management--the art of making good judgments. By presenting examples from his own experience, Brown provides interesting insights into the profession of public management.

Chase, G., and E. Reveal. (1983) How to Manage in the Public Sector. Reading, Mass: Addison-Wesley Publishing Company.

A practical guide for readers currently or planning to be public administrators, this book deals with relationships both within and outside the organization. It is a short, readable text containing practical advice on how to survive in a large bureaucracy. The inside discussion considers relationships with subordinates and supervisors, while the outside portion encompasses elected officials, community groups, special interests, and the media.

Connolly, T., E.J. Conlon, and J.S. Deutsch. (1980) "Organizational Effectiveness: A Multiple-Constituency Approach." Academy of Management Review 5: 211-17.

The authors propose a "multiple-constituency approach" to address the needs and interests of special groups served directly and/or indirectly by any organization, but they particularly focus on public service organizations. Measures of effectiveness must reflect the evaluative criteria of the organization's various constituencies. The proposed conceptual framework for assessing effectiveness suggests three areas in which a reorientation of empirical study might be needed: the distribution of organizational satisfactions; issues of organizational location and change; and the time dimension as it relates to determining and achieving effectiveness.

Corzantes, C.A., and R. Delgado. (1980) "Setting Standards for Monitoring the Performance of Primary Care Personnel-Outreach Workers." Ambulatory Care Manager 3(2): 35-52.

This article addresses the need to evaluate service elements (i.e., personnel, physical facilities, and mechanisms for service operations) when assessing program effectiveness and service utilization. The study on which the article is based examined the effectiveness of trained professional personnel who conducted home visits in a district in Colombia where mortality and morbidity rates were declining. Three measures were used: personnel absenteeism; attempted visits; and convincing capacity. Of the four main activities (measuring growth and assessing nutritional status, detection of diarrhea, pregnancy detection, and family planning), the mean evaluation scores were all satisfactory excepting growth and nutrition monitoring and detection of diarrhea. Need for additional and stronger training of personnel conducting these latter activities was indicated.

Crane, D.P., and W.A. Jones. (1982) The Public Manager Guide. Washington, DC: Bureau of National Affairs.

The authors' intent is to help practicing public managers improve their professional performance. This book is easy to read and really designed to be a "how to" guide for use in real-world organizations.

Downs, A. (1967) Inside Bureaucracy. Boston: Little, Brown and Company.

This volume on bureaucratic organizations can be especially helpful to readers trying to understand why some organizations work and others fail. Downs analyzes bureaucracies from a "rationalist" perspective, that is, individuals who work in and/or manage organizations act largely out of self-interest, which determines how and why bureaucracies perform in certain ways. He examines the growth of bureaucracies; the special characteristics of the bureaucratic organization; internal characteristics, particularly methods of command, control, and communication; organizational decision-making; behavior of bureaucratic managers;

interactions with other organizations; bureaucracies as social culture; and the dynamics of organizational change--processes, constraints, and factors that encourage innovation.

Drucker, P.F. (1973) "Managing the Public Service Institution." The Public Interest 33: 43-60.

Public service institutions represent an increasing proportion of the American economy, yet most public sector organizations, ranging from the postal service to educational institutions, are not performing today as well as they did a century ago. Drucker states that the management of public service organizations must be improved through the use of performance measures and feedback mechanisms that channel performance results back into their service systems. Emphasizing that public institutions do not need more managers--Drucker maintains that many such organizations are "over-administered"--the author recommends systematic program audits combined with ongoing measurement of results to improve public sector management. He suggests that this approach will compensate for the lack of market externalities which force private sector organizations to "keep up" or cease operations.

Dunsire, A. (1978) Control in a Bureaucracy. New York: St. Martin's Press.

Dunsire focuses on how managers maintain control within complex organizations. This somewhat theoretical book can be helpful in identifying strategies that can be used to ensure that what workers actually do is in agreement with organizational goals and objectives.

Elmore, R. (1978) "Organizational Models of Social Program Implementation." Public Policy 26: 185-228.

This book presents four perspectives on organizational behavior in social programs. One is a "systems model" which views organizational behavior as a rational, goal-directed activity. A second describes a bureaucratic process which emphasizes the roles of discretion and routine and views

program implementation as a process to control discretionary decisions and to change established routines. The third, organizational development, focuses on the needs of individuals within bureaucracies for participation and commitment. The final description is of a conflict/bargaining model, which views organizational decisions and actions to be the outcomes of a continuous negotiation process. At any given time, one or more of these models might be operative in a public, social service organization.

Golembiewski, R.T. (1976) Perspectives on Public Management. Itasca, Ill: Peacock Publishers.

In this collection of case studies, the author presents the theory first and then demonstrates theoretical principles through the description of actual cases. Each case study focuses on a specific and different aspect of public management. Topics include: managing conflict, managing decision-making, and relations between headquarters and field offices.

Hudgins, A.A., J.L. Graves, B.W. Abbott, E.R. Blair, C. Meyers, and P. Van Ness. (1982) "Issues in Family Planning Clinic Management." Family and Community Health May: 47-59.

This article describes the use of patient flow analysis (PFA) in family planning clinic management. Some of the common problems identified among the 883 family planning clinics were: long patient waits for clinic services; minimal amount of staff time devoted to patient contact; and inefficient assignment of staff. Suggested solutions included establishing appointment systems and calculating personnel needs.

Hummel, R.P. (1979) The Bureaucratic Experience. New York: St. Martin's Press.

The author constructs a framework in which to consider and understand bureaucracies. He particularly concentrates on how bureaucratic organizations represent a different social culture from everyday life experiences. Hummel attempts to provide a structured awareness that can help indi-

viduals work with, and within, bureaucracies as managers, employees, and clients.

Jobson, J.D., and R. Schneck. (1982) "Constituent Views of Organizational Effectiveness: Evidence From Police Organizations." Academy of Management Journal 25: 25-46.

Jobson and Schneck are particularly concerned about the lack of common criteria for measuring effectiveness across diverse organizations. As one method for remedying this deficiency, they designed a study to (1) identify, select, and specify a variety of organizational effectiveness criteria; (2) operationalize and measure these criteria; and (3) investigate the interrelationships among these multiple criteria using data collected from police units. They assumed that internally defined criteria of effectiveness are not sufficient. The authors also assumed that multiple criteria are needed in order to conduct a comprehensive evaluation that reflects multiple organizational goals as well as the criteria of multiple constituencies. Organizations can be simultaneously effective and ineffective according to a number of different criteria derived from multiple goals and constituencies. The authors conclude: "...sequential attention to effectiveness criteria, along with numerous trade-offs, may permit (human service) organizations to exist and even thrive with considerable latent criteria conflict and inconsistency."

Lipsky, M. (1980) Street-Level Bureaucrats. New York: Russel Sage.

The author is the original proponent of the concept of "street-level bureaucracies," that is, lower level workers in public organizations (eligibility workers, for example) whose responsibilities permit the exercise of a high degree of discretion have substantial effects on the nature of services delivered to clients. Because of various resource constraints, these workers adopt a variety of coping strategies (such as routinized procedures, limiting time spent with certain clients) which tend to become the actual program. This "street-level" program is often significantly different from what was originally intended by policy-makers. Consequently, this book is especially

helpful for administrators who want to create organizational conditions that maximize the extent to which the intended service delivery program is, in fact, the one provided to the client.

Loddengaard, R.A., and T.J. Vitaglione. (1979) "Management Issues in the Organization and Delivery of Family Planning Services." Public Health Reporter 94(5): 459-65.

The authors review issues which are of importance to persons and agencies interested in developing Statewide family planning programs: State support; allocation of funds; setting goals based on service effect rather than service efficiency; secondary sources of funding; and patient data systems. Statewide programs permit the maximization of available resources, the equitable distribution of resources throughout the State, the development of a Statewide third-party reimbursement system, the opportunity to develop evaluation mechanisms, support for starting a system of fee collection, and the use of a Statewide patient data system. Disadvantages of a State program include some loss of local control, possible organizational battles within State agencies, State political domination of program policy, and potential funding shifts. In the early 1970s, development of Statewide systems was coupled with a rapid increase of funding when broad service coverage and accessibility were key factors. At the present, categorical funding is not increasing, and efficiency and maximization of resources are emphasized.

Mahoney, T.A., and W. Weitzel. (1969) "Managerial Models of Organizational Effectiveness." Administrative Science Quarterly 14: 357-65.

The authors consider concepts of organizational effectiveness, grouping components of such concepts into three sets of criteria: ultimate, intermediate, and immediate. Because the ultimate criterion of organizational effectiveness (long-run goal achievement) is difficult to measure in the short run, Mahoney and Weitzel focused on a group of intermediate (or midrange) criterion dimensions. They found that these midrange criteria, which are measurable organizational characteristics, can and

do serve as operational, short-run substitutes for the more subjective, long-run ultimate criterion of organizational effectiveness.

March, J.G., and H.A. Simon (1958) Organizations. New York: John Wiley and Sons.

This volume, prepared by faculty of the Graduate School of Industrial Administration at the Carnegie Institute of Technology, presents a broad overview and summary of organizational theory and its applications to formal organizations. In a readable and forthright style, the authors assess the literature on formal organizations, the role of the social sciences in the study of organizations, and the history of "classical" organization theory. They further discuss the importance of staff/manager motivation and attitudes, decision-making, organizational conflict, and planning and innovation in organizations. Use of diagrams and flow charts to illustrate important concepts ties together this comprehensive review of basic theory with principles of organizational behavior.

Morgan, G. (1986) Images of Organization. Beverly Hills: Sage Publications.

Effective managers and professionals in all walks of life become skilled in the art of "reading" the situations that they must organize or manage. The author works from the premise that theories and explanations of organizational life are based on metaphors that lead individuals to see and understand organizations in distinctive yet partial ways. He proposes that by using different metaphors to understand organizational life, professionals can find new ways to design and manage organizations.

Newman, W.H., and H.W. Wallender, III. (1978) "Managing Not-for-Profit Enterprises." Academy of Management Review 3: 24-31.

"The popular belief that business management concepts can be applied readily to not-for-profit enterprises needs qualification. Not-for-profit enterprises differ widely; each has its own managerial needs, and many have discriminating con-

straints that sharply modify which concepts will be effective."

To support these assertions, the authors reviewed the literature on managing not-for-profit enterprises ranging from hospitals to art museums; conducted a pilot study of how 22 not-for-profit enterprises are actually managed; and designed an approach for identifying and better understanding the distinctive aspects of managing such enterprises. They recommend that not-for-profit enterprises be treated as variants of the basic management model, with managerial emphasis on identification of constraints and the effects of these constraints on selecting appropriate managerial strategies. Constraining characteristics include the need to define and meet intangible objectives, employee commitments to professions or causes that undermine their allegiance to the nonprofit enterprise, limits on the use of rewards, and weak customer influence.

Pressman, J.L., and A. Wildavsky. (1973) Implementation. Berkeley: University of California Press.

This book describes an employment project conducted by the Economic Development Administration in Oakland, California. It shows how centrally designed programs can fail when faced with the realities of local implementation, particularly interest group politics and the difficulty of working through hierarchical bureaucracies.

Pugh, D.S., D.J. Hickson, and C.R. Hinings. (1986) Writers on Organizations. Beverly Hills: Sage Publications.

A wide range of theorists have influenced not only the study of organizations, but also the actual behavior of organizations. This book summarizes a range of writings on organizational structure and function, organizational decision making and management, and an organization's interaction with people--its employees and the outside society.

Writers on Organizations was first commissioned by the Administrative Staff College at Henley-on-Thames. This volume is an updated third edition.

Rainey, H.G., R.W. Backoff, and C.H. Levine.
(1976) "Comparing Public and Private Organizations." Public Administration Review 36: 233-244.

Although some authors have suggested that public and private organizations are converging and facing similar constraints and challenges, this comprehensive survey of the literature, which compares the two, suggests that such a conclusion is premature and that differences do exist. Using a diagrammatic summary of the literature on differences between public and private organizations, Rainey et al. highlight points of both difference and consensus in such areas as environmental factors, organization-environment transactions, and internal structures and practices. Acknowledging that consensus is not proof, the authors discuss the implications of their findings for future research and for current management practices and training.

Sayles, L.R., and M.K. Chandler. (1971) Managing Large Systems. New York: Harper and Row, Publishers.

Using the National Aeronautics and Space Administration (NASA) as an example of a complex and successful contemporary organization and citing some Japanese and British systems as well, the authors discuss public and private-sector relationships among managers, scientists, and engineers. They also review the resolution of intrinsic conflicts, such as technical goals that are inconsistent with business requirements. The NASA example is extended to a discussion of typical modern organizational systems, such as the health care and the legal systems, that are both public and private and that include nonroutine work requiring collaboration among highly trained, "independent" professionals with diverse goals. The authors conclude that NASA's human and technical successes prove that large, complex systems can be managed well.

Schermerhorn, J.R., J. Hunt, and R. Osborn.
(1982) Managing Organizational Behavior. New
York: John Wiley and Sons.

This basic textbook on organizations includes chapters on most of the key aspects of organizational behavior. Chapters focus on the role of the manager, people at work, motivational and leadership theories, goal setting, group dynamics, decisionmaking, communication and conflict, and the process of change.

Sherman, H.D. (1984) "Improving the Productivity of Service Businesses." Sloan Management Review Spring: 11-23.

Service organizations account for over 60 percent of the GNP, but management tools are less developed for this sector than for the manufacturing sector. Management tools for manufacturing are not directly transferable to service organizations because organizational goals are different for these two institutional areas.

This article describes Data Envelopment Analysis (DEA), a linear programming technique for evaluating and improving the productivity of many types of service organizations. Service organizations that can be evaluated using DEA are those in which multiple services are produced with multiple inputs, where the efficient input/output relationships are not known or are difficult to identify, and where several units can be compared to evaluate relative performance. DEA can be a useful complement to other management tools in order to improve efficiency and profitability. The article describes the application of DEA to a bank and a hospital.

Simon, H. (1957) Administrative Behavior. New York: The MacMillan Company.

The second edition of this classic incorporates early advances in the analysis of human behavior within organizations into Simon's original conceptual framework of human decision-making processes within organizations. Simon's framework use the premise, rather than the decision, as the unit of analysis. Noting that upper-level decisionmaking in large organizations is often based on

narrow perspectives or incomplete understanding of how organizations work, he attributes such managerial short-sightedness to a lack of realism and the lack of operational definitions of loosely used terms such as "authority" and "function." Simon then attempts to construct a vocabulary and a set of concepts suitable for describing how administrative organizations work.

Starling, G. (1977) Managing the Public Sector.
Homewood, Ill: Dorsey Press.

This textbook on public administration includes a number of practical guidelines for the program manager. Starling discusses planning and decision-making, organizational structure, financial management, and personnel.

Steers, R.M. (1977) Organizational Effectiveness: A Behavioral View. Santa Monica: Goodyear Publishing Company.

Steers addresss the problems of determining the relative degrees of organizational effectiveness and then offers ways in which managers can facilitate success. He integrates organization-wide factors, such as structure and technology, with individual factors, such as employee motivation, attachment, and performance, "...in the belief that any dynamic model of organizational effectiveness must examine the processes by which individual effort and behavior influence subsequent organizational performance." The book reviews systems theory and analyses of available assessment techniques. Steers identifies and discusses four categories of determinants of effectiveness: (1) organizational characteristics; (2) environmental characteristics; (3) employee characteristics; and (4) managerial policies and practices.

One management tool described in this volume is human resource accounting, which attempts to reflect investments or changes in human resources on the organization's balance sheet. For example, investments in staff training are treated in the same manner as investments in new machinery, while a high turnover of trained employees represents a tangible loss that is reflected in accounting records. This system allows for a clear accounting of where investments in personnel are spent and

what return is being realized. Further, managers can be evaluated on the basis of how well human resource assets have been preserved and enhanced.

Organizational Change

Argyris, C. (1985) Strategy, Change and Defensive Routines. Marshfield, Mass: Pitman Publishing Company.

This volume, on the implementation of change, especially focuses on changes that are threatening to organizations and the individuals in them. Argyris provides clear guidance on strategies to apply in a variety of situations. Although mainly intended for the consultant who serves as a "change agent," the book can also help the program manager cope with organizational change.

Bartlett, A.C., and T. Kayser. (1973) Changing Organizational Behavior. Englewood Cliffs, NJ: Prentice-Hall, Incorporated.

This collection of articles on the process of organizational change offers particularly practical guidance on ways to ensure that achievements meet expectations.

Beckherd, R., and R. Harris. (1977) Organizational Transitions: Managing Complex Change. Reading, Mass: Addison-Wesley Publishing Company.

This short readable book for program managers provides some ideas on how to bring about large-scale change in complex organizations.

Bennis, W. (1966) Changing Organizations. New York: McGraw-Hill Book Company.

This collection of essays on the problems of change emphasizes the ever-increasing rate of change in the modern world. Other foci are: (1) the effects of rapid change on human organizations, and (2) how behavioral scientists can provide direction on the rate, shape, and consequences of change. Essays discuss changing patterns of organizational leadership and the concept of organizational health.

Behavioral scientists can help to plan and direct organizational change by applying knowledge from fields such as sociology and psychology to conceptual issues that arise in organizations. Managers will need a greater understanding and appreciation of the behavioral sciences as the nature of decisionmaking changes.

Blau, P.M., and M. Meyer. (1971) Bureaucracy in Modern Society. New York: Random House.

Originally written in 1956, this book has become a classic in the field of organizational theory. This is not a "how to" book. Rather, it is one which will stimulate thinking about the bureaucratic experience. The authors approach the issue from a sociological perspective, drawing heavily on the work of Max Weber. They explore the social structure of bureaucracies with particular emphasis on how these structural patterns affect individuals who work within the organizations as well as the effects on persons who must interact with bureaucracies. Of particular interest is Chapter 6 on the problems of implementing innovations in established bureaucratic organizations.

Burns, T., and G.M. Stalker. (1962) The Management of Innovation. Chicago: Quadrangle Books.

Burns and Stalker focus on the effects of technical information. Using three case studies as illustrations, they address "mechanistic" and "organic" styles of management. The former is highly structured, with clear job descriptions, duties, and lines of command; it is better suited to organizations not experiencing technical change. In "organic systems," which are better suited to unstable conditions, jobs are less formally defined, interaction runs laterally as much as vertically (consultations rather than commands), and individuals perform their tasks in light of their understanding of the tasks of the organizational whole. The authors conclude that conditions favoring organic systems are affecting an increasing proportion of industrial enterprises, and organizations adopting such systems are more likely to survive and grow under conditions of change.

Clark, B.R. (1956) "Organizational Adaptation and Precarious Values: A Case Study." American Sociological Review 21: 327-36.

Social values, defined as "conceptions of the desirable that are distinctive of some human group," are affected by the actions of administrative agencies. Social values tend to be precarious when they are undefined (not embodied in existing goals and standards), when the positions of proponents are not fully legitimized, and when the values themselves are unacceptable to a "host" population. Using the example of adult education directors in a State school system, the author examines the general problem of how groups attempt to implement their values when these values are precarious and discusses changes in meaning that occur with broader acceptance.

Gawthrop, L.C. (1971) Administrative Politics and Social Change. New York: St. Martin's Press.

This book discusses the role of the federal government, particularly the executive branch, during an era of rapid social change. High-level government administrators, traditionally politically astute bureaucrats, must learn to deal with steadily mounting forces of technological, social, and political change if they are to survive. The most immediate effect is a fundamental change in the nature of the external sociopolitical environment of the bureaucrat: instability and uncertainty have become the norm, placing a strain on all government structures and systems--particularly on the administrative branch.

Golembiewski, T.R. (1979) Approaches to Planned Change (Part 2). New York: Marcel Dekker, Incorporated.

In this volume, the author focuses on changes to large organizations. The innovations discussed here are primarily changes intended to improve the ways in which organizations accomplish their objectives. That is, Golembiewski focuses on change internal to the organization rather than organizational response to external change.

Gross, N., J.B. Giacuinta, and M. Bernstein.
(1971) Implementing Organizational Innovations. New York: Basic Books.

The primary objective of this report on the design and implementation of an educational innovation was to isolate factors that inhibit and facilitate the implementation of planned organizational change. Relying heavily on structured interviews with teachers about their perceptions and experiences, the authors attribute the failure of the attempted innovation to factors not usually considered in explaining the success or failure of organizational change. Barriers included teachers' lack of clarity about their roles, teachers' lack of required knowledge and skills, a lack of materials and equipment, and preexisting organizational arrangements, such as a rigid school schedule, that were incompatible with the innovation. Identification of these factors points out the inadequacy of citing "resistance to change" as the primary cause of failure to implement an innovation.

Huse, E. (1975) Organizational Development and Change. St. Paul: West Publishing Company.

Although directed at finding ways to make organizations more "humanistic," this discussion of implementing organizational change can be more generally applied to altering a variety of existing administrative routines and procedures whether or not the intent is humanistic. The book is broad in its coverage and provides some ideas for numerous administrative situations.

Kaufman, H. (1971) The Limits of Organizational Change. Tuscaloosa: University of Alabama Press.

This short, highly readable text identifies the constraints to changing existing organizations (resource limitations, managerial and staff rigidity, discretionary behavior, and the like) and offers practical ways to overcome these problems.

Thompson, V. (1969) Bureaucracy and Innovation.
Tuscaloosa: University of Alabama Press.

This somewhat theoretical book deals with a wide variety of methods and strategies for improving organizational response to rapid technological and social change.

Cost Analysis

Alkin, M. (1969) Evaluating the Cost Effectiveness of Instructional Programs. Los Angeles: University of California Center for the Study of Evaluation of Instructional Programs.

American Dietetic Association. (1979) Costs and Benefits of Nutritional Care: Phase I. Chicago: ADA.

Bateman, W. (1967) An Application of Cost Benefit Analysis to the Work-Experience Program. American Economic Review 57: 80-90.

Baumol, W. (1965) Welfare Economics and the Theory of the State. 2nd ed. Cambridge, Mass: Harvard University Press.

Bell, C. (1964) Cost Effectiveness Analysis as a Management Tool. Santa Monica: Rand Corporation.

Borus, M.E., C.G. Buntz , and W.R. Tash. (1982) Evaluating the Impact of Health Programs: A Primer. Cambridge, Mass: The MIT Press.

Budding, D.W. (1983) Effects on Administrative Cost of Monthly Reporting in Michigan. Cambridge, Mass: Abt Associates Inc.

Budding, D.W., C. Baker, and C. Cole. (1979) Working Paper on Review of Literature and Related Projects Concerning Work Measurement. Cambridge, Mass: Abt Associates Inc.

Budding, D.W., J. Wallace, and R. Ames. (1981) Issues in the Design of Administrative Cost Reporting Requirements in the AFDC Program. Cambridge, Mass: Abt Associates Inc.

Burstein, N.R., B.D. Goodson, B.R. Nutt-Powell, and J.C. Wood. (1985) The Combined Effects of Monthly Reporting on AFDC and Food Stamps. Cambridge, Mass: Abt Associates Inc.

Burstein, N.R., and W.L. Hamilton. (1985) The Costs and Benefits of Monthly Retrospective Reporting in the AFDC Program. Cambridge, Mass: Abt Associates Inc.

Burstein, N.R., and B.R. Nutt-Powell. (1984) How To Measure Costs and Benefits of Monthly Reporting for Categories of AFDC Recipients. Cambridge, Mass: Abt Associates Inc.

Chamie, J., and S.K. Henshaw. (1982) "The Costs and Benefits of Government Expenditures for Family Planning Programs." Family Planning Perspectives 13: 117-126.

Chase, S.B. (ed.) (1966) Problems in Public Expenditure Analysis. Washington, DC: The Brookings Institution.

Crystal, R.A., and A.W. Brewster. (1966) "Cost Benefit and Cost Effectiveness Analyses in the Health Field: An Introduction." Inquiry 3: 3-13.

Dorfman, R. (ed.) (1963) Measuring Benefits of Government Investment. Washington, DC: The Brookings Institution.

Dunlop, D.W. (1975) "Benefit-Cost Analysis: A Review of Its Applicability in Policy Analysis for Delivering Health Services." Social Science Medicine 9: 133-139.

Feldstein, M. (1964) "Opportunity Cost Calculations in Cost Benefit Analysis." Public Finance 19: 117-39.

Fleming, P.L. (1982) "Cost Effectiveness/Cost Benefit Analysis Strategies." The Community Nutritionist 1: 23-26.

Friedman, L. (1984) Microeconomic Policy Analysis. New York: McGraw-Hill Book Company.

Goldman, T. (ed.) (1966) Cost-Effectiveness Analysis: New Approaches in Decision Making. New York: Praeger Publishers.

Hammond, R. (1966) "Convention and Limitation in Benefit Cost Analysis." Natural Resources Journal 6: 195-222.

- Harberger, A. (1978) "On the Use of Distributional Weights in Social Cost Benefit Analysis." Journal of Political Economy 82 (2, part 2): S87-S120.
- Harrison, D., and D. Rubinfeld. (1978) "Hedonic Housing Prices Indexes and the Demand for Clean Air." Journal of Environment and Economic Management 5: 81-102.
- Hinricks, H., and G. Taylor (eds.) (1969) Program Budgeting and Benefit Cost Analysis. Pacific Palisades: Goodyear Publishing Company.
- Hirsh, W. (1970) The Economics of State and Local Government. New York: McGraw-Hill Book Company.
- Layard, R. (ed.) (1972) Cost Benefit Analysis. Middlesex, England: Penguin Books.
- Levin, A.L. (1968) "Cost Effectiveness in Maternal and Child Health: Implications for Program Planning and Evaluation." The New England Journal of Medicine 278: 1041-47.
- Levin, H.M. (1975) "Cost-Effectiveness Analysis in Evaluation Research" in M. Guttentag and E.L. Struening (eds.) Handbook of Evaluation Research. Beverly Hills: Sage Publications.
- Levine, A. (1967) "Evaluation Program Effectiveness and Efficiency: Rationale and Description of Research in Programs." Welfare in Review 5: 1-11.
- Levine, A. (1966) "Cost Benefit Analysis and Social Welfare." Welfare in Review 4: 1-11.
- Levine, A. (1966) "Cost Benefit Analysis of the Work Experience Program." Welfare in Review 4: 1-9.
- Lowi, T. (1966) "Benefit Cost Analysis: Its Relevance to Public Investment Decisions." Quarterly Journal of Economics 319: 208-26.
- Luft, H. (1976) "Benefit-Cost Analysis and Public Policy Implementation." Public Policy 24: 437-462.
- Malitz, D. (1984) "The Costs and Benefits of Title XX and Title XIX Family Planning Services in Texas." Evaluation Review 8.

- Mansfield, S., and J. Trask. (1981) Cost of Participation in the Food Stamp Program: A Single Office Example. Cambridge, Mass: Abt Associates Inc.
- Mishan, E. (1971) Cost Benefit Analysis: An Introduction. New York: Praeger Publishers.
- Mishan, E. (1969) "A Survey of Welfare Economics, 1939-1959." Economic Journal 70: 197-265.
- Musgrave, R. (1959) The Theory of Public Finance. New York: McGraw-Hill Book Company.
- Novick, D. (ed.) (1967) Program Budgeting: Program Analysis and the Federal Government. Cambridge, Mass: Harvard University Press.
- Nutt-Powell, B.R. (1985) Administrative Effects of Monthly Reporting in the Food Stamp Program. Cambridge, Mass: Abt Associates Inc.
- Nutt-Powell, B.R., and D.W. Budding. (1982) How to Conduct a Management Survey: Suggestions for the Planning and Implementation of a Field Study of AFDC Administration in a Local Welfare Office. Cambridge, Mass: Abt Associates Inc.
- Peterson, R.D. (1986) "The Anatomy of Cost Effectiveness Analysis." Evaluation Review 10: 29-44.
- Popkin, B., and R. Lidman. (1972) "Economics as an Aid to Nutritional Change." The American Journal of Clinical Nutrition 25: 331-344.
- Prest, A.R., and R. Turvey. (1965) "Cost Benefit Analysis: A Study." Economic Journal 75: 683-735.
- Rivlin, A. (1970) Systematic Thinking for Social Action. Washington, DC: The Brookings Institution.
- Rossi, P.H., H.E. Freeman, and S.R. Wright. (1979) Evaluation: A Systematic Approach. Beverly Hills: Sage Publications.
- Shephard, D.S., and M.S. Thompson. (1979) "First Principles of Cost-Effectiveness Analysis in Health." Public Health Reports 94: 535-43.

- Smith, W.F. (1968) "Cost-Effectiveness and Cost-Benefit Analyses for Public Health Programs." Public Health Reports 83: 899-906.
- Spears, M.C. (1976) "Concepts of Cost Effectiveness: Accountability for Nutrition, Productivity." Journal of the American Dietetic Association 72: 341-44.
- Splett, P. (1982) "Understanding Program Costs." The Community Nutritionist May-June: 22-25.
- Splett, P. (1982) "Examining Program Costs." The Community Nutritionist July-August: 22-25.
- Squire, L.S., and H.G. van der Tak. (1975) Economic Analysis of Projects. Baltimore: The Johns Hopkins University Press.
- Thompson, M.S. (1982) Benefit-Cost Analysis for Program Evaluation. Beverly Hills: Sage Publications.
- Tolpin, H.G. (1980) "Economics of Health Care." Journal of the American Dietetic Association 76: 217-222.
- Trask, J.H., and D.W. Budding. (1981) Working Paper on the Measurement of Administrative Performance in the Food Stamp and AFDC Programs. Cambridge, Mass: Abt Associates Inc.
- Trask, J.H., D.W. Budding, R. Ames, and P.L. Burstein. (1981) Food Stamp Administrative Cost Analysis. Cambridge, Mass: Abt Associates Inc.
- Warner, D.D., and W.L. Hamilton. (1985) Effects on Administrative Cost of Monthly Reporting in Massachusetts. Cambridge, Mass: Abt Associates Inc.
- Warner D.D., W.L. Hamilton, and B.R. Nutt-Powell. (1985) Effects of Monthly Reporting on AFDC Administrative Costs in Illinois. Cambridge, Mass: Abt Associates Inc.
- Watts, C.A., M. Jackson, and J.P. LoGerfo. (1979) "Cost Effectiveness Analysis: Some Problems of Implementation." Medical Care 17: 430-34.

Weinstein, M.C., and W.B. Stason. (1977) "Foundations of Cost-Effectiveness Analysis for Health and Medical Practices." The New England Journal of Medicine 296: 716-721.

Wildavsky, A. (1966) "The Political Economy of Efficiency." Public Administration Review 26: 292-310.

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